

HITACHI

products for industry, for home, for a better life all over the world



Our trademark is more than a symbol



"Hi" (*Symbol for Sun*)



"Tachi" (*Symbol for Rise*)



*Namihei Odaira engineer,
innovator founded Hitachi in 1910.
Up to that time, a Japanese company
always bore the symbol of one of the
great families. But Odaira gave his
company the name of the town in which
it began: Hitachi on the Pacific coast of
Honshu.*

*Actually, this departure from tradition
was more than appropriate. Odaira was
starting the first public Japanese company,
the first company dedicated to public
service.*

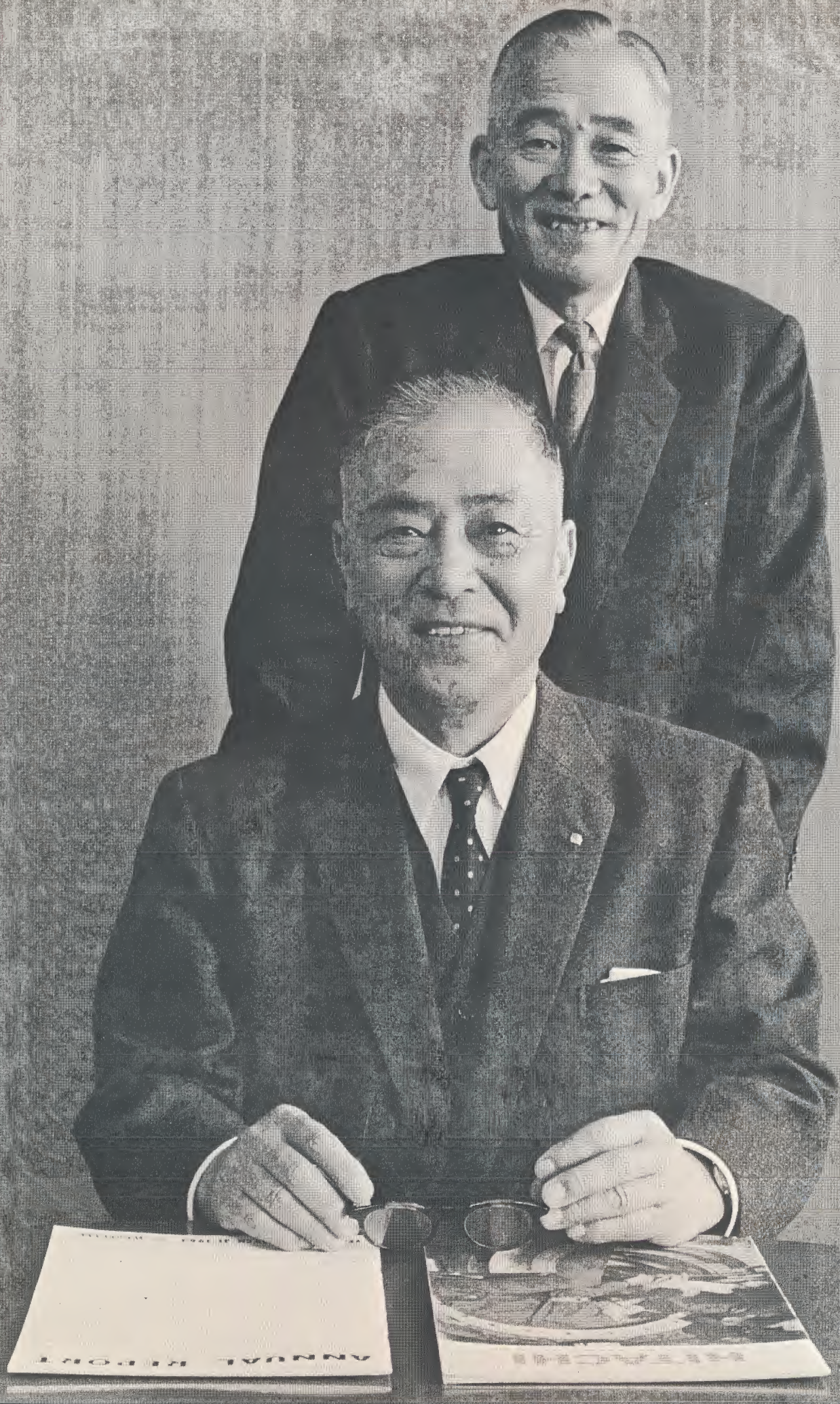
*Since Odaira was creating a new type of
Japanese company, he decided to create a
new type of Japanese trademark.*

*The name Hitachi was ideal. It means
“Sun rising.” The ancient inhabitants
of the town had chosen it because they
believed their home was the easternmost
tip of Japan, and thus the first place the
sun rises in Japan.*

*To Odaira, the sun was an excellent
symbol for the public aspect of the
company. The Chinese character “Hi”
is used in Japanese to represent the sun.
“Tachi”—rising—symbolized the dynamic
aspect.*

*Odaira superimposed one character upon
the other, and added four prongs as
stylized sun beams. These last elements
are regarded by the Japanese as icons of
prosperity.*

*Today, we can see that Odaira had
written the future of Hitachi in its
trademark. For Hitachi has risen to be
Japan's leading industrial complex. And
Hitachi has never lost the public
consciousness which Namihei Odaira so
deeply cherished.*



Message

In its more than 54 years of existence Hitachi has been working toward a single objective, the development of original techniques. This concept has been the driving force behind Hitachi's present-day prosperity. Hitachi is not only a leader among Japanese enterprises, but is ranked as an important member of international business groups. The reputation enjoyed by Hitachi throughout the world is best expressed by the nickname given to us, the "Collossus of the Orient."

Hitachi is manufacturing, at present, more than 10,000 types of products for supply to all parts of the world, with emphasis on electrical and industrial machinery. In addition, Hitachi has undertaken the export of Japan's unique industrial technology, a technology stemming from the national character of Japan. Our company has also engaged in the promotion of technical cooperation ventures with other business leaders, resulting in rich rewards to industry and consumers throughout the world.

In order to improve our overall business activities, part of our research program has been centered on consolidation of our manufacturing facilities.

Production efficiency and quality control are the results of factories being logically arranged, equipped with the latest, automated equipment and properly managed.

With this in mind we have established 77 plants outfitted to meet the demands of modern production requirements, yet are striving toward future expansion while maintaining the highest standards of quality available anywhere.

This pamphlet is designed to serve as a guide to our laboratories and plants, as well as to exhibit the many uses for our products. We sincerely hope that after reading this the reader will have a deeper understanding of Hitachi's position and ethics.



Chikara Kurata
Chairman of the Board



Kenichiro Komai
President





Research

Research and development are the pillars supporting all business activities. Hitachi considers these to be important as well as production and marketing or more than. This point is analogous to the "eternal flame" that was lit at the time of Hitachi's founding and kept alive by the traditions that are Hitachi, for more than fifty years.

This flame will continue to burn throughout Hitachi's existence.

The nucleus of Hitachi's vast research and development program are the two major facilities. The Central Research Laboratory and the Hitachi Research Laboratory.

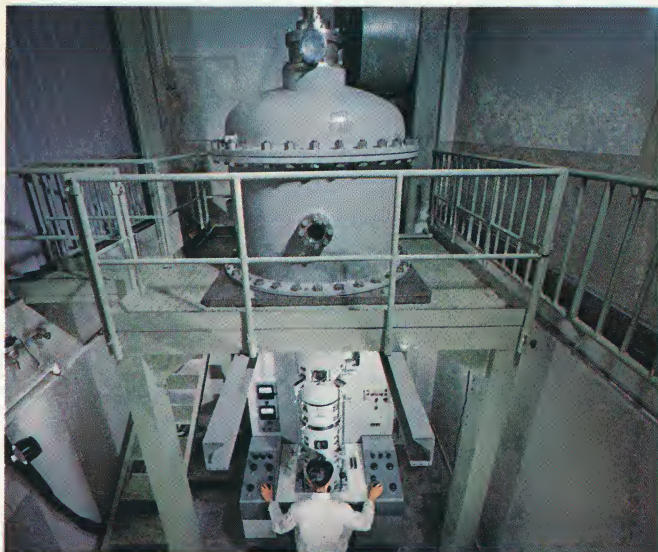
In a combined effort more than 2,500 scientists are employed at these centers.

The Central Research Laboratory is chiefly concerned with basic scientific and technological advances in such fields as electricity, machinery, metallurgy, etc.

Also under consideration is the development of new products and quality improvement, atomic energy and general electronic equipment studies.

At the Hitachi Research Laboratory research activity is confined mainly to application and utilization of various industrial techniques in such fields as heavy electrical machines and associated equipment.

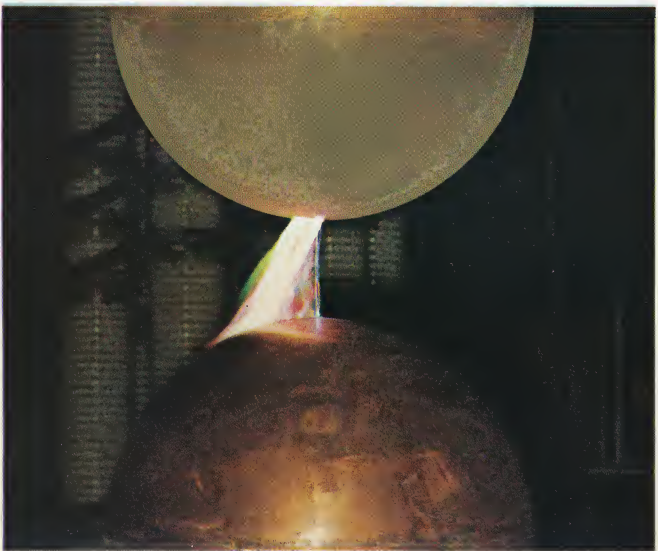
Ultra-modern laboratory facilities are available for studies that include hydraulic power, thermal power, atomic energy application, isotope investigations, automatic controls, and others. Hitachi firmly believes that scientific techniques being developed from these research programs will be partially responsible for the future prosperity of mankind.



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Hitachi has been also concentrating its efforts in research fields, nucleonics and electronics. The results have been many significant developments in these vital areas.

In 1962 the Hitachi Training and Research Atomic Reactor (HTR) was completed.

This was the first, all domestically produced atomic reactor to be made in Japan.

In the field of power generating through atomics the No. 1 Atomic Reactor of the Japan Atomic Energy Research Institute will start operation in 1965.

Within a few years it is expected to produce approximately 1,000,000 kW of power, to be followed by full-fledged industrialization through the use of atomics.

Hitachi is planning for the years ahead by stressing the designing and development of machines and equipment for atomic power stations.

With a ship powered by nuclear energy now in the planning stage, to be launched in 1970, Hitachi resources are being directed toward the development of atomic reactors for marine use.

In the field of industrial electronics, research and development has been carried out in three main areas: electronic computers, electron tubes and semi-conductor components and communication equipment.

Research on electronic computers was started in the Central Research Laboratory after the war.

In 1963 the first domestically-made digital computers were developed.

They were the HITAC 5020 and HITAC 4010 and have proven most useful for handling communications system data.

Hitachi is well-known for its precision scientific instrument, especially electron microscopes, which have won the Grand Prix at international Exposition held in Brussels.

High resolving power, Hitachi electron microscopes have added much to man's challenge against the microscopic world in natural science.

1) 500,000 V Electron Microscope

Hitachi's electron microscope was awarded the Grand Prix at the 1958 Brussels' World Fair, rewarding Hitachi's progress in the development of physical and chemical instruments.

2) HITAC 5020

3) Short-Circuit Testing Equipment

Hitachi's Kokubu Works, producing power transmission, transformation and distribution facilities, has a large capacity short-circuit testing equipment one of the greatest of its kind in the world.

4) Core part of Hitachi Training Reactor

Japan's first domestically-manufactured HTR reactor for training was tested in June, 1962, and reached a maximum output capacity of 100 kW.



Transportation

Hitachi's Rolling Stock Department has an impressive history in the transportation equipment field, starting with the first electric locomotive to be built in Japan.

The year 1963 saw two more "firsts" added to the credit of this division of Hitachi.

The first, in cooperation with the Japan National Railways a super express train was developed for the New Tokaido Line, which covers the 515 kilometer distance between Tokyo and Osaka. Traveling at unprecedented speeds, these major industrial areas are connected in three hours time, the train having recorded, several times, the world's fastest speed, 250 km/hr.

Although operated by highly trained personnel, speed and safety functions are controlled by the Central Traffic Control (CTC) and Automatic Train Control (ATC) systems.

The best that electronics has to offer is found in these two systems.

The second achievement recorded in 1963 was the completion of the Haneda Monorail Line that connects Tokyo International Airport and downtown Tokyo.

Modern living and the pressure of social progress demands increases in our transportation facilities. The HITACHI-ALWEG system Monorail is drawing much attention as a possible solution to traffic problems of all large cities in the future.

Others in the Hitachi line of passenger transporters are the DC, gearless elevator with fully automatic group controls; the "Crystalator," the escalator with crystal-clear side panels; and various types of electric locomotives and diesel cars.

Hitachi has been active in the export all over the world, of their rolling stock equipment.

1) Hitachi-Alweg System Monorail

The monorail connects Tokyo International Airport with Tokyo at a maximum speed of 100 km/h.

2) Hitachi AC Electric Locomotive to be Shipped to India

A single phase, AC 250 kV, 50 c/s, silicon rectifier system, 2,400 kW freight traffic electric locomotive for India

3) Hitachi Crystalator

A completely transparent escalator, four units of

which have been delivered to Kaufhof Department store, Cologne, West Germany.

4) Elevator

A DC gearless elevator of fully automatic group control type; its door is uniquely designed, utilizing Italian-made fancy boards.

5) Electric Cars for New Tokaido Line

Maximum service speed 210 km/h
Maximum permissible speed 250 km/h
The car bodies are completely airtight.



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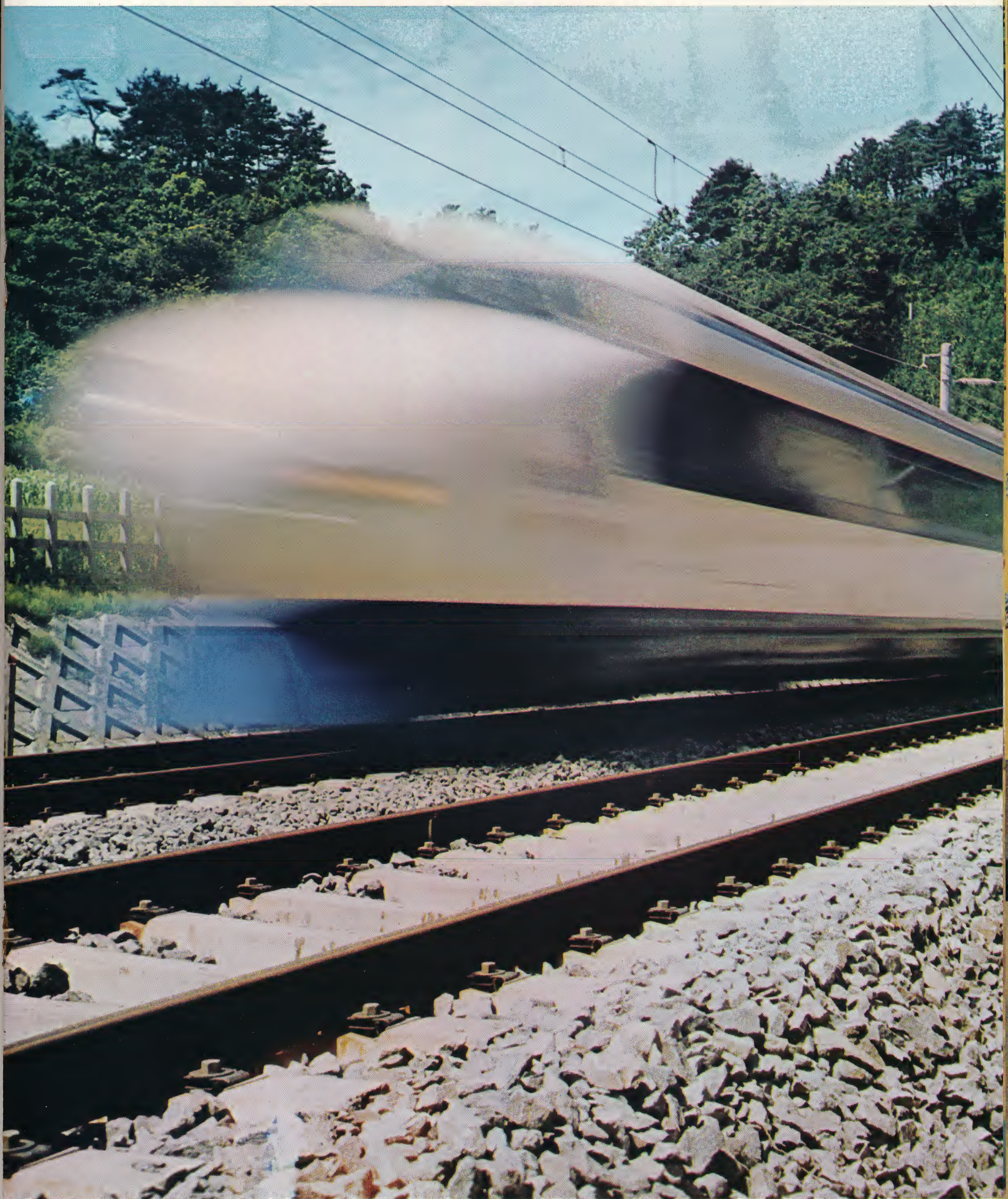
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Industrial Products

Hitachi's industrial, machines, communication equipment and electronic computers form another important production group in association with the product line of heavy electric equipment. These products have spearheaded technical advances leaving the way open for rapid progress in the future. Electronic computers, sometimes called "electronic brains" or "the greatest invention of the 20th Century," are representative of these products. Many firms in Japan are taking positive steps to modernize their management systems by incorporating the use of electronic computers.

Thus, the demand for this product is rapidly increasing.

Hitachi is making significant progress in this field; production of electronic computers for business and scientific studies together exceed 35% of the nations total computer production.

Besides the HITAC 5020 and HITAC 4010 described under "RESEARCH" the HITAC 3030 is drawing attention as a large-scale systems computer for centrally operated, automatic seat reservations, for railways and airlines.

In the communications equipment field, Hitachi has successfully produced Japan's first, domestic cross-bar telephone exchange system.

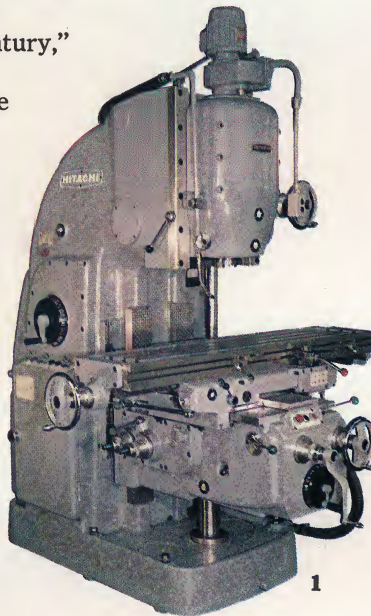
Used for automatically switching long distance telephone calls, it has added much to the third 5-year expansion program of the Japan Telegraph and Telephone Corporation.

Hitachi's products in the industrial machinery line include Rolling mills, compressors, machine tools, printing machines, air conditioners construction machines, water treatment units, chemical plants and many others.

These products are used in the most modern industrial facilities, both in Japan and throughout the world, and are playing an important role in the new scientific and technical revolution now in progress.

Take, for example, material handling machines; 1,000 t/hr unloader, the largest in the Orient, is now in full operation at the site. Another example is the largest cast-pan type crane, with a 220/40 t capability, also made by Hitachi. Gas compressors can be found at work in the petrochemical field and another Hitachi product, the excavator, has found wide usage in road and building foundation construction. Also represented in the nation's land development program are Hitachi's tractors and cranes, all pointing-up the advanced, high level of Hitachi's mechanized industrial techniques.

1) No. 3 ML Vertical Milling Machine



2) Power Shovel

Powerful excavating capacity and easy operation have created a new efficiency record for Hitachi's universal excavator of more than 10,000 work hours.

3) Gas Compressor for Petrochemical Industry

A 4,300 kW binary refrigerator for ethylene separating equipment incorporating recent research results and delivered to Nihon Petrochemical Co.

4) HITAC 5020

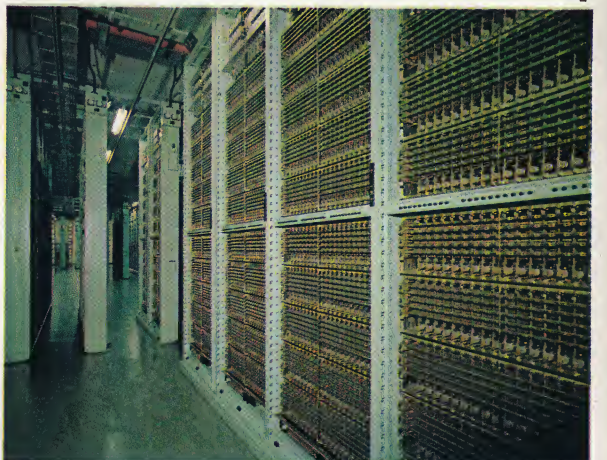
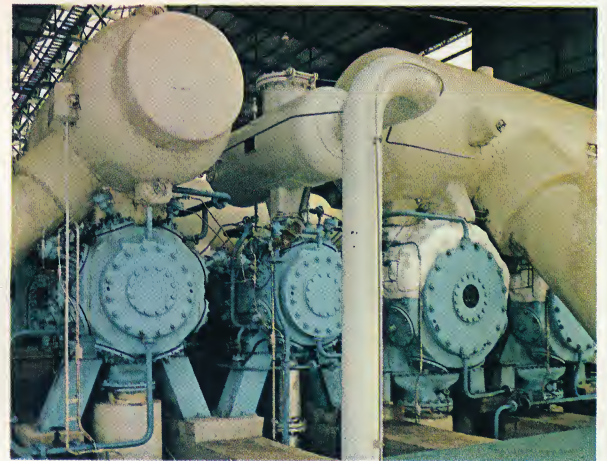
Hitachi's development of a real time type total system electronic computer is pushing ahead to contribute to worldwide technical renovation.

5) Crossbar Switchboard

At Japan Telegraph and Telephone Corporation, Hitachi's improved Models C41, 51 are at work through a remote control system from the main exchange.

6) Ladle Crane for Revolving Furnace

A 220 ton, easily operated and maintained ladle crane for extra large revolving furnaces delivered to Tokai Iron and Steel Mill.

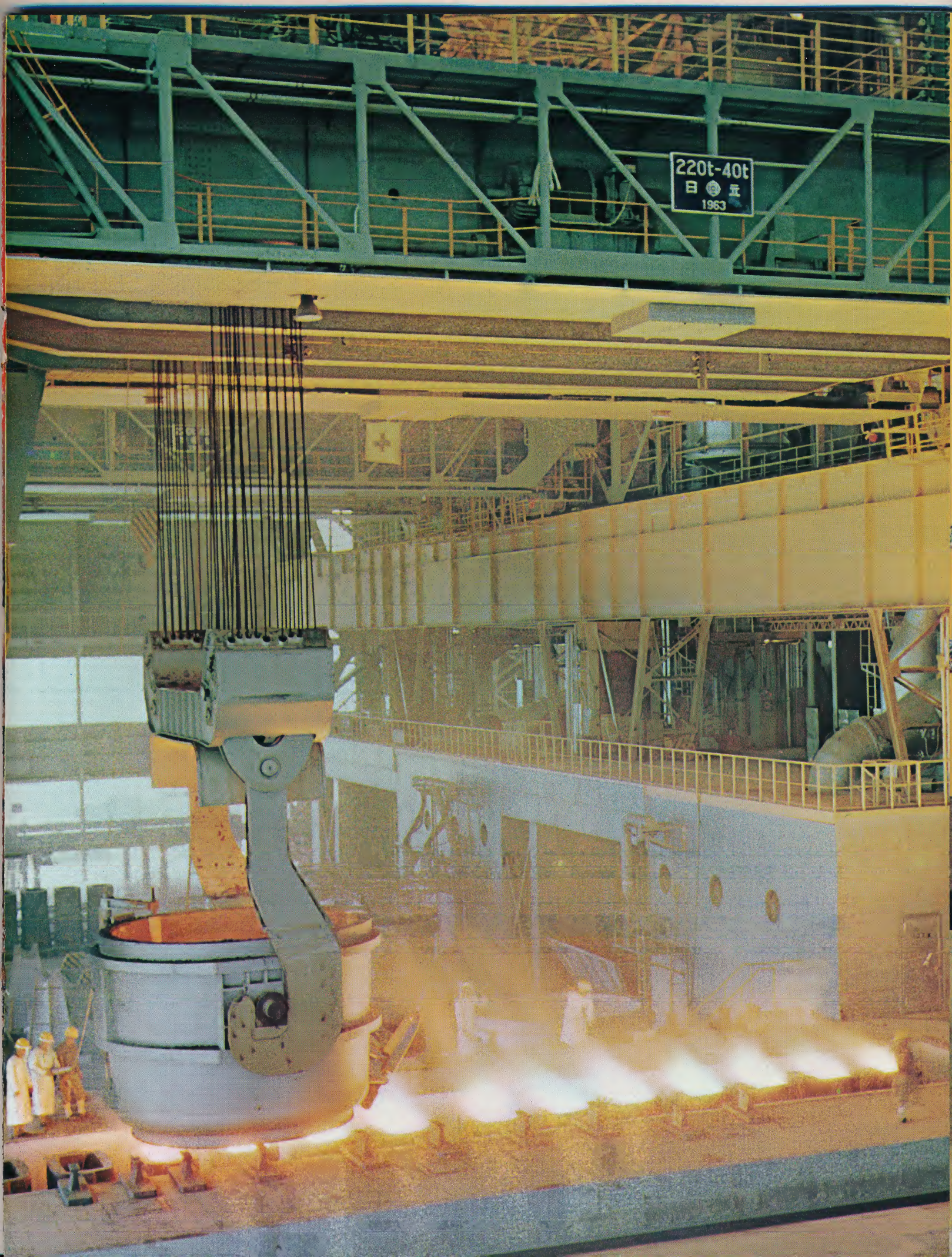


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Household Appliances

Today, Hitachi produces more than 2,000 electric household appliances for consumer distribution. New ideas and improvements of existing models are the result of Hitachi's advanced technology, derived from years of experience, and continuing research.

Production of electric fans started in 1916 and refrigerators in 1925.

From that time until now, proper planning and the skillful use of marketing techniques have resulted in wide acceptance of these and other Hitachi products.

However, with the constant changes directed by market demands every present, Hitachi is always modernizing its production techniques. Other influencing factors are developments, in Hitachi research laboratories, of new uses for raw materials and production machinery.

In addition to the above, a continuous, integrated production system—from raw materials to finished products—accounts for the even flow of quality products from Hitachi.

For instance, in Hitachi fans a free-range oscillation mechanism is used to permit the oscillating angle to be continuously changed from zero degrees to 280 degrees.

Hitachi refrigerators have more storage space in ratio to their outside dimensions.

Hitachi transistor radios are engineered for higher sensitivity and greater tone quality.

Hitachi television sets bring you clearer pictures through the use of automatic circuit regulators.

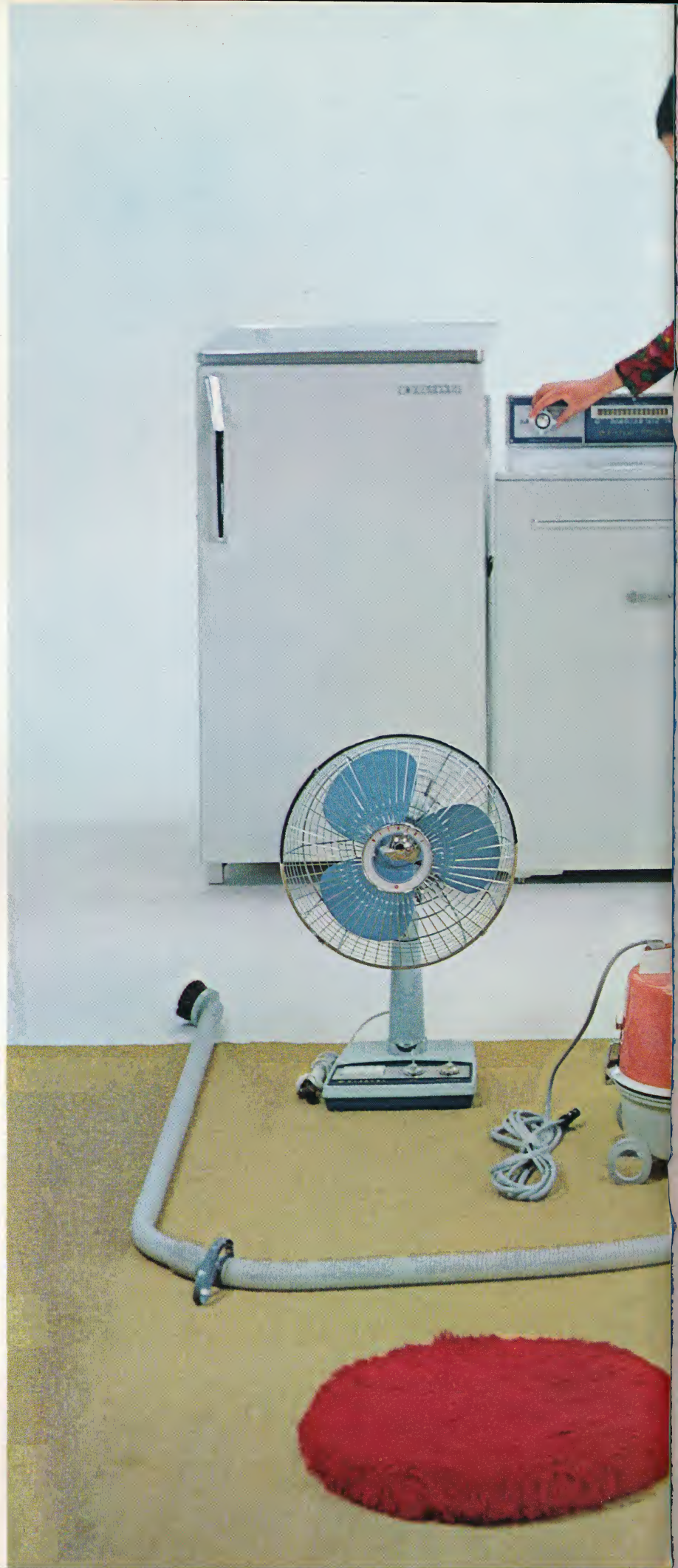
All of these products have enjoyed great popularity in the U.S.A., Central and South America, Southeast Asia and Middle.

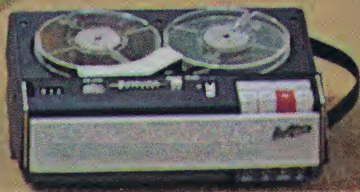
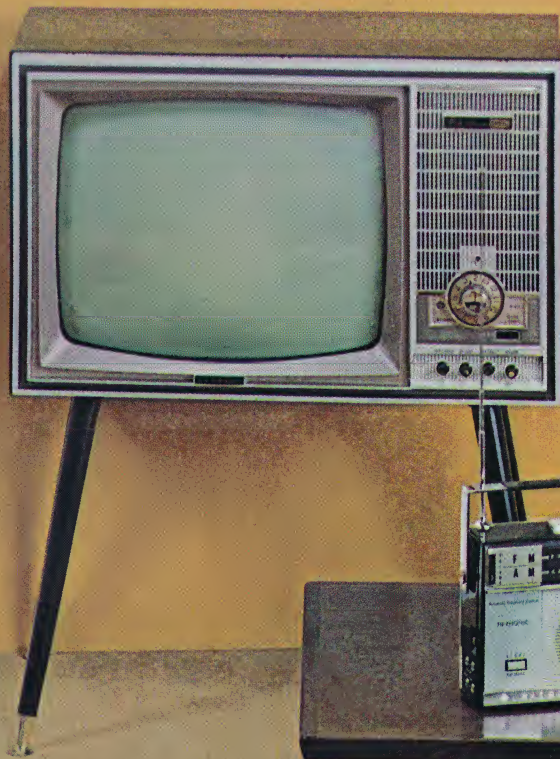
In addition to quality engineering, the Design Research Department of Hitachi's Central Research Laboratory is constantly working for ways to increase the beauty and functional capabilities of the household product line.

They have reached no small measure of success as evidenced by a closer look at what Hitachi has to offer.

Electric Household Appliances

Hitachi's electric household appliances are designed to contribute to modern living by creating more leisure time, greater cleanliness and comfort.





Other Products

The electric motor is, by far, the oldest product manufactured by Hitachi. It may safely be said that the history of motors in Japan is, in actuality, the history of Hitachi motors.

Hitachi general motors are constantly being praised for their operational efficiency and outstanding power capabilities.

They are mass-produced on completely automated production lines and inspected under the strictest quality control system at the Hitachi Narashino Works.

This factory, built in 1963, is utilized exclusively for the production of motors and motorized controls.

During the five years between 1958 and 1963, the Japanese automobile industry recorded an annual production increase of 47%.

To meet the quality and quantity demands brought on by this upsurge of automobile production, Hitachi Auto Parts Division prepared new products and revised many of the existing models, such as, general electrical equipment, LPG fuel carburetors, spark plugs, car radios, power seats, ignition coils, etc.

These new and improved products not only contributed to the progress of the domestic automobile industry, but, have been exported overseas in large quantities.

The affiliated companies are engaged in the manufacture of such items as electric wires, cables, rolled copper products, iron and steel products, chemical products, etc. Some of these companies are Hitachi Wire & Cable, Ltd., Hitachi Metal Industries Ltd. and Hitachi Chemical Company, Ltd.

All of these, and others, work together as an integrated group to supply everything from raw materials to the finished product. This is representative of the diversification of the Hitachi System of consolidated production.

1) Packaged Air Conditioners

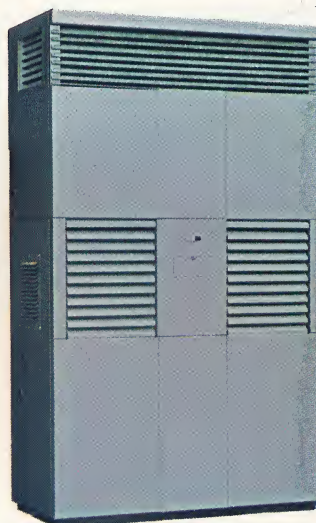
Water-cooled, heat-pump and air-cooled types. Easily installed in general offices

2) Hitachi Electron Tubes and Semiconductors

Transmitting and receiving tubes, transistors and diodes, etc., for general market sale and use in Hitachi electronic products.

3) Hitachi Metal Products

Hitachi produces over 50% of all malleable pipe couplings produced in Japan, extra large rolls for rolling of iron, steel products.



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4) Installation of Hitachi Cable Delivered to Indian Electric Bureau

These cables carry electric power from power plants to industrial areas to contribute to the promotion of India's industry.

5) "Hitter"

Beautifully-colored melamine panel with heat, scratch and acidic-resistant properties. Suitable for interior decorating, commercial use in refrigerators, passenger coaches, etc.

6) Hitachi Motor

Highly rated in U.S. and throughout the world. Exports range from universal motors to special motors for electronic computers.



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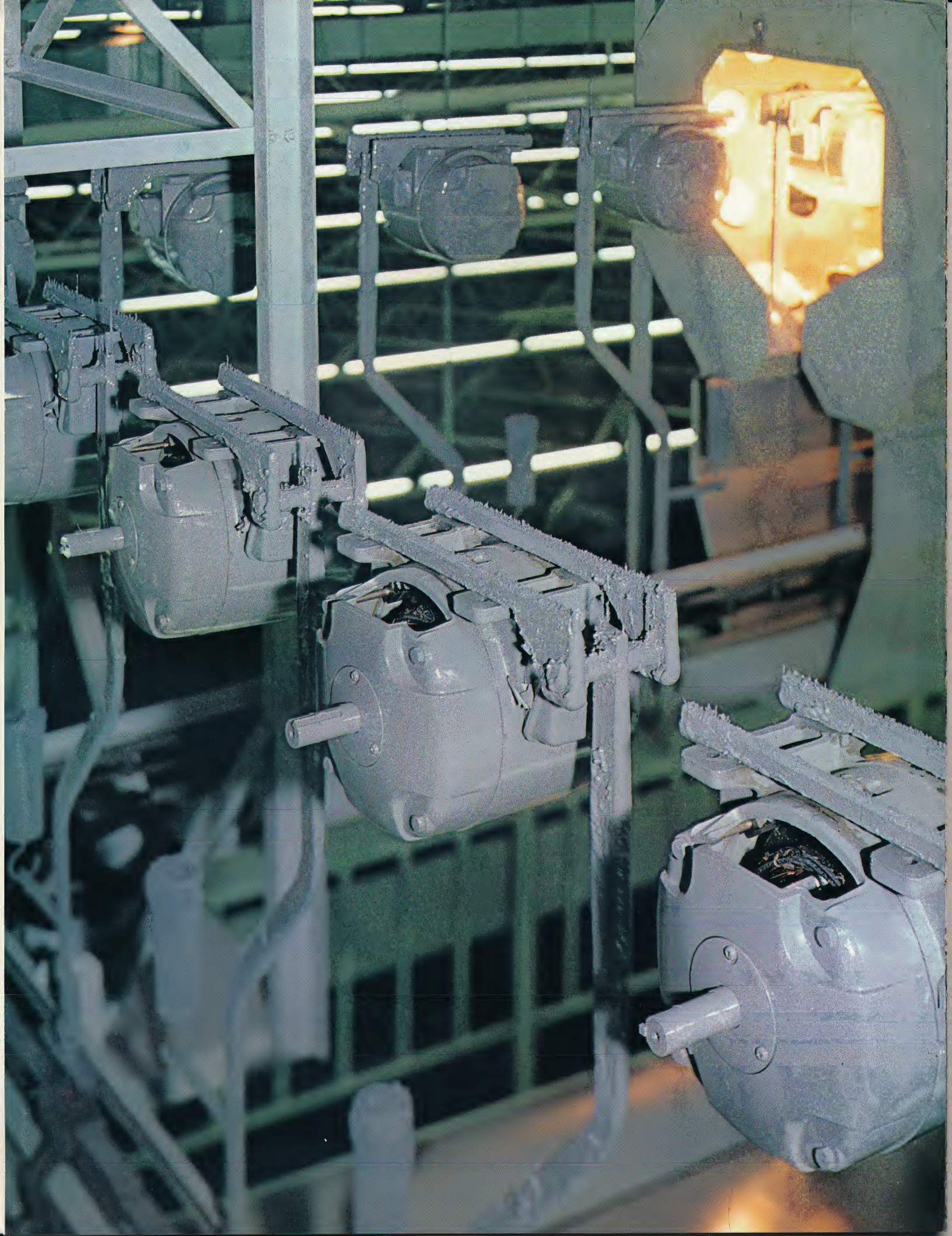
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Plants

1) Overall View of Hitachi Works

Hitachi Works, the most symbolic among the 19 facilities of Hitachi, Ltd. which are scattered throughout Japan, was founded in Hitachi city, Ibaragi Prefecture, in 1910 at the same time as the founding of Hitachi, Ltd.

At the site of the birthplace of Hitachi, Ltd., Yamate Works, a part of the Hitachi Works, presently lies. This works has produced and developed numerous products and techniques since its founding.

2) A Turbine

Heavy electric machine such as water wheels, turbines and generators are the main products of this plant. Hydroelectric generating facilities, in particular, account for 80% of Japan's total export of this item.

Site: 39. 007. 899. Sgft.

Machines and equipment:

8,288 units

Number of employees: 10,886

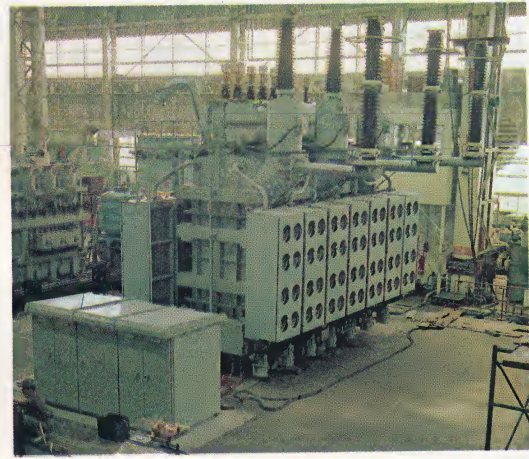
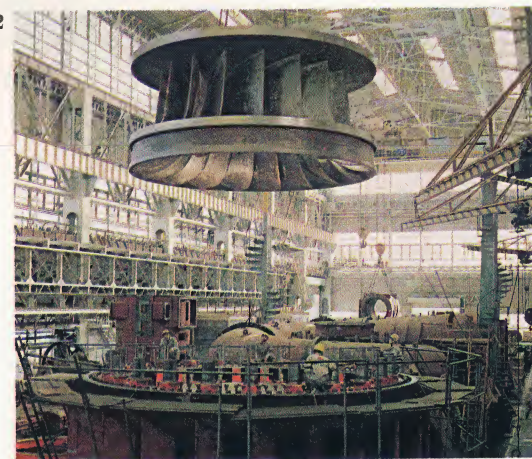
3) Completion of a transformer at Kokubu Works

This plant specializes in transmission, transformation and distribution facilities such as transformers, switchboards, circuit breakers, etc. In 1963, the first transformer of 270,000 kVA ever exported to the U.S.A. was shipped to Los Angeles.

4) 2,300 mm Inclined Axial-Flow Pump (for Egyptian Government)

Developed at Kameari Works

At this plant, various industrial machines and equipment such as transportation facilities, mining machines, construction machines, pumps, diesel engines, etc. are produced. The plant's techniques in these fields are making extensive inroads into the overseas market.





5) Refrigerator Assembly Line at Tochigi Works

As the only plant specializing in refrigeration devices, this plant produces refrigerators, room coolers, dehumidifiers, water coolers, etc. by automation.

6) Mass Production of Motors using the Transfer Machine at Narashino Works

Motor controlling devices being produced in this plant play important roles in industrial automation in this age of technological renovation.

7) Production of Electron Tubes at Mobara Works

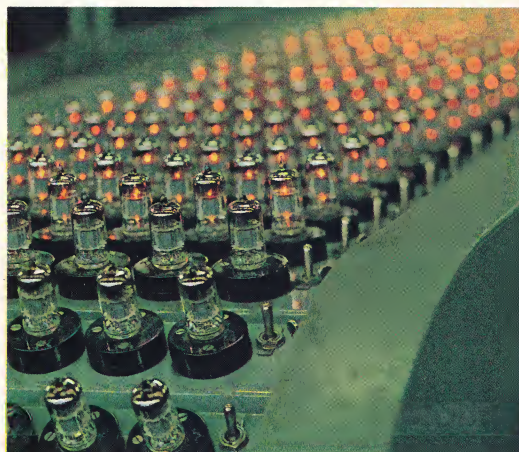
In production at this completely air-conditioned electron tube plant are: cathode ray tubes which compose about one third of total production in Japan, various types of receiving and transmitting tubes and X-ray tubes.

8) A Diesel-Electric Locomotive being Assembled at Kasado Works

The latest techniques employed at this plant have led to the development of the super express train of the New Tokaido Trunk Line and the Hitachi-ALWEG Monorail.

9) Assembly Line at Yokohama Works

Yokohama Works specializing in acoustic produce such as Radio, Television, Tape Recorder and Stereo, etc.



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Panama Branch Office

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REPUBLIC OF PANAMA*

- * *Hitachi Sales Corporation is a subsidiary company for sales and distribution of Hitachi electric home appliances, electron tubes and semiconductor devices.*

Main Products

Prime Movers

Boilers, Steam Turbines, Water Turbines, Diesel Engines, Carburetors, Atomic Reactors

Heavy-Duty Electrical Equipment

Generators, Motors, Phase Modifiers, Rotary Converters, Rectifiers, Transformers, Induction Regulators, Switchboards, Circuit Breakers, Control Equipment, Condensers, Arresting Equipment, Traction Motors and Controllers, Atomic Power Plants

Household Electrical Appliances and Measuring Instruments

Electric Refrigerators, Electric Fans, Home Air-Conditioners, Electric Washers, Vacuum Cleaners, Electric Well Pumps, Heaters for Domestic Use, Electric Mixers, Television Sets, Radio Sets, Tape Recorders, Stereo Stereo Sets, Sewing Machines, Lighting Fixtures, Incandescent Lamps, Fluorescent Lamps, Dry Cells, Electric Components and Accessories for Automobiles, Industrial Measuring Instruments, Relays, Scientific Research Instruments, Electron Microscopes, X-Ray Apparatus

Communications and Electronics Equipment

Telephone Sets, Telephone Exchanges, Carrier Telephone Equipment, Radio Communications Equipment, Broadcasting Equipment, Industrial Television Equipment, Electronic Data Processing Equipment, Transmitting Tubes, Receiving Tubes, Picture Tubes, Transistors, Diodes

Industrial Machinery

Compressors, Blowers, Pumps, Water Treatment Plants, Pneumatic Conveyors, Transporting Machines, Elevators, Moving Stairways, Moving Sidewalks, Rolling Mills, Welding Equipment, Machine Tools, Electric Tools, Chemical Plants, Precipitators, Refrigeration Equipment, Air-Conditioners, Mining Machinery, Equipment for Civil Engineering, Printing Machines

Rolling Stock

Electric Locomotives, Diesel Hydraulic Locomotives, Diesel Electric Locomotives, Steam Locomotives, Passenger Coaches, Electric Cars, Diesel Cars, Trolley Buses, Hitachi-Alweg Monorail Cars, Cable Cars, Freight Cars, and Wagons, Tank Cars, Industrial Rolling Stock, Industrial Trailers

Other Products

Electric Wire and Cable, Aluminum Wire and Cable, Rolled Copper Products, Steel and Special Steels, Rollers for Rolling Mills, Malleable Cast Iron Products, Rolled Products, Forged and Cast Steel Products, Cutting Tools, Pipe Fittings, Synthetic Resin Materials and Products, Carbon and Graphite Products, Electric Insulating Materials, Sintered Products, Ceramic Insulators



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